

IN THE CLAIMS:

Please amend claims 1, 9, 18, 20, and 29.

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1. (Amended) A compression plate anastomosis apparatus for anastomosing a first vessel to a second vessel, comprising:

a first compression plate having a first compression plate opening;

wherein the first compression plate opening has a perimeter defined by first holding means for holding a portion of the first vessel that defines a first vessel opening, wherein the first compression plate is shaped to enable the first vessel portion to extend through the first compression plate opening in a manner such that the first vessel opening conforms to the perimeter of the first compression plate opening, and wherein the first holding means is adapted to hold the first vessel portion in a manner such that the first vessel portion is at least partially everted and is not penetrated; and

a second compression plate having a second compression plate opening;

wherein the second compression plate opening is defined by second holding means for holding a portion of a second vessel that defines a second vessel opening,

wherein the first compression plate and the second compression plate have means for locking the compression plates together such that the portion defining the first vessel opening and the portion defining the second vessel opening are joined without being penetrated such that the first vessel and the second vessel are anastomosed together.

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9. (Amended)

A compression plate anastomosis apparatus as recited in claim 8, wherein the compression plate opposite from the compression plate from which the guiding means extends has plurality of holes through which the guiding means are inserted such that the compression plate is a glidably mounted on the guiding means, and wherein the holes are sized to provide frictional resistance to movement of the glidably mounted compression plate on the guiding means.

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18. (Amended) A compression plate anastomosis apparatus for anastomosing vessels, comprising:

a first compression plate having a first compression plate opening;

wherein the first compression plate opening is defined by a plurality of holding tabs extending from a ring of said first compression plate, wherein the ring and the holding tabs are adapted to enable the portion of the first vessel defining the first vessel opening to extend through the first compression plate opening in a manner such that the first vessel opening conforms to the perimetrical shape of the first compression plate opening, and wherein the holding tabs are adapted to hold the first vessel portion in a manner such that the first vessel portion is at least partially everted and is not penetrated; and

a second compression plate having a second compression plate opening;

wherein the second compression plate opening is defined by a holding surface located around the second compression plate opening with a configuration such that the portion of the second vessel defining the second vessel opening may be everted onto the holding surface;

wherein the first compression plate and the second compression plate have mated locking components to lock the compression plates together such that the portion defining the first vessel opening and the portion defining the second vessel opening are joined without being penetrated such that the first vessel and the second vessel are anastomosed together.

20. (Amended) A compression plate anastomosis apparatus as recited in claim 18,

B4 wherein one of the mated locking components comprises a plurality of locking arms extending from an outer periphery of the ring of the first compression plates and the other mated locking component is a locking extension extending from the second compression plate.

29. (Amended) A snap-fit compression plate anastomosis apparatus for anastomosing vessels, comprising:

a first compression plate having a first compression plate opening;

B5 wherein the first compression plate opening is defined by a plurality of holding tabs extending from a ring of said first compression plate, wherein the ring and the holding tabs are adapted to enable the portion of the first vessel defining the first vessel opening to extend through the first compression plate opening in a manner such that the first vessel opening conforms to the perimetrical shape of the first compression plate opening, and wherein the holding tabs are adapted to hold the first vessel portion in a manner such that the first vessel portion is at least partially everted and is not penetrated; and

a second compression plate having a second compression plate opening;

wherein the second compression plate opening is defined by a holding surface located around the second compression plate opening with a configuration such that the portion of the second vessel defining the second vessel opening may be everted onto the holding surface;

wherein the first compression plate has an outer periphery from which a